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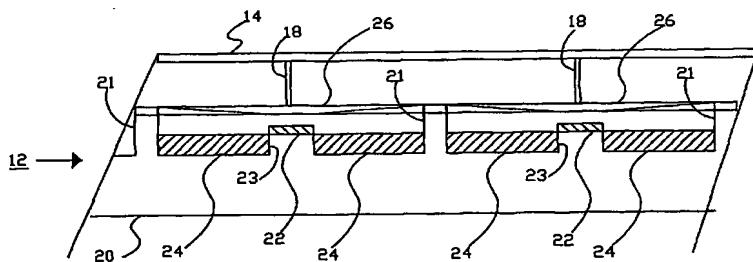
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(54) Title: SURFACE DEFORMATION ACTUATION STRUCTURE



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(57) Abstract: A structure such as an electronically deformable mirror contains a deformable membrane, an array of actuators located facing the membrane, each actuator being arranged to actuate local displacement of the membrane perpendicular to its surface. The actuators and the membrane are connected via an array of actuating connections. The actuating connections substantially transmit movement perpendicular to the second surface, but leave planar displacement and/or local rotation of the second surface substantially free. Preferably, the actuators contain an array of soft magnetic islands on a soft magnetic base plane, with actuator coils running around the islands and a system of soft magnetic walls on the base plane to separate the coils. The walls support a soft magnetic resilient surface that extend over of the islands and serve to drive the actuating connections. Preferably the base plane is supported on an array of rod shaped connection elements, leaving space to permit air to circulate between the support structures and the support plate.